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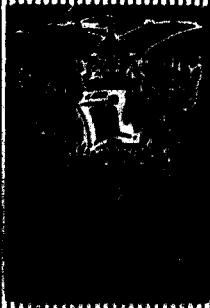
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ROYAL AIRCRAFT ESTABLISHMENT

TECHNICAL REPORT No. 65204

65204

SEPTEMBER

1965



**LIST OF STRUCTURES
DEPARTMENT REPORTS WITH
ALPHABETICAL LIST OF AUTHORS
MARCH 1947 - AUGUST 1964**

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ROYAL AIRCRAFT ESTABLISHMENT

Technical Report No.65204

September 1965

(7) LIST OF STRUCTURES DEPARTMENT REPORTS WITH
ALPHABETICAL LIST OF AUTHORS MARCH 1947 - AUGUST 1964

(C-MHA)

(9) Technical rept.

(11) Sep 65

(12) 58 p.

SUMMARY

(14) TR-65204

This report gives a complete list of Reports issued by Structures Department (Nos.1-297 inclusive) together with an alphabetical list of authors and co-authors.

Details of external publication are given where appropriate. Later Reports issued by Structures Department are in the R.A.E. Technical Report 64000 series.

The Security classification is that current at the present date, and is not necessarily the same as was operative at the time of issue of the particular reports.

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No.	Title of Report	Author(s)	Date	Security	External Publication
1	Research work in aircraft structures.	P.B. Walker	March 1947	U	Aero Research Council. R&M No. 2327.
2	Sandwich construction. A practical approach for the use of aircraft designers.	D. Williams	April 1947	U	Aero Research Council. R&M No. 2466.
3	Landing of an aircraft on a suspended sheet.	J. Taylor	June 1947	U	Aero Research Council. R&M No. 2574.
4	Experimental verification of the photo-elastic stress values in the interior of a Catalin model when using the stress freezing method.	W.A.P. Fisher	July 1947	U	
5	The structural aspects of propeller design.	L.H.G. Sterne	July 1947	U	
6	The effect of uniformly spaced flexible ribs on the stresses due to self-equilibrating systems applied to long thin walled cylinders.	E.H. Mansfield M. Fine	Aug. 1947	U	Aero Research Council. R&M No. 2832.
7	Experimental investigation into plate web spars under shear. Part III - spar with 16 swg web.	F. Crowther N. Sanderson	Feb. 1948	U	
8	Experimental investigation into plate web spars under shear. Part IV - Destruction tests on spars with 24, 20 and 16 swg webs.	F. Crowther N. Sanderson	March 1948	U	
9	Aileron reversal and wing divergence of swept wings.	E.G. Broadbent Ola. Mansfield	Sept. 1947	U	Aero Research Council. R&M No. 2817.
10	Interim report on results obtained from V-g recorders fitted to Meteor III aircraft.	D.T. Jones	Oct. 1947	U	
11	The diffusion of load into a semi-infinite sheet. (Part I)	E.H. Mansfield	Nov. 1947	U	Aero Research Council. R&M No. 2670.

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No.	Title of Report	Author(s)	Date	Security	External Publication
12	Generalised Fourier Series and the roots of the governing transcendental equations $\tan \left\{ \frac{r + Cr}{\cot} \right\} = 0$	E.H. Mansfield	Dec. 1947	R	
13	The effect of spanwise rib-boom stiffness on the stress distribution near a wing cut out.	E.H. Mansfield	Dec. 1947	U	Aero Research Council. R&M No.2663.
14	Some notes of the flapping motion of rotor blades.	J.B.B. Owen	Dec. 1947	U	Aero Research Council. Current Paper No.1.
15	Prediction of wing structure weight.	F. Grinsted	Jan. 1948	R	
16	Report of R.A.E. advanced bomber project group.	Staff of R.A.E.	Feb. 1948	R	
17	The dynamic landing loads of flying boats with special reference to measurements made on Sunderland T.X.293.	A. Burns A.J. Fairclough	Feb. 1948	U	Aero Research Council. R&M No.2629.
18	Comparative flutter tests on 2, 3, 4 and 5 blade propellers.	H.G. Ewing J. Kettlewell D.R. Gaukroger	March 1948	U	Aero Research Council. R&M No.2634.
19	Theoretical investigations of ternary lifting surface - control surface - trimming tab flutter and derivation of a flutter criterion.	H. Wittmeyer	Oct. 1948	U	Aero Research Council. R&M No.2671.
20	The relationship of achieved maximum speeds to service maximum speed limitations for some service aircraft.	D.T. Jones	March 1948	U	
21	Technical investigation into an explosion of German 109/501 A.T.O. unit at Westcott on November 14th, 1947.	Members of the R.A.E.		R	

No.	Title of Report	Author(s)	Date	Security	External Publication
22	Torsional vibration characteristics of Centaurus VIIC Engine.	M.O.W. Wolfe E. Downham	April 1948	R	
23	Influence of thickness chord ratio and aspect ratio on weight of aircraft, applied to a bomber specification.	J. Taylor	May 1948	U/C	
24	Simple formulae for predicting the weights of wing, fuselage and tail unit structures.	F. Grinsted	May 1948	R	
25	Speeds and normal accelerations of Boeing Clipper aircraft on North and South Atlantic routes.	D.T. Jones	May 1948	U	Aero Research Council. R&M No.2633.
26	Mechanical vibration and aero-elasticity.	P.B. Walker	May 1948	U	Journal Royal Aeronautical Soc. October 1946.
27	The diffusion of load into a semi-infinite sheet. Part II.	E.H. Mansfield	June 1948	U	Aero Research Council. R&M No.2670.
28	Empirical formulae for moments of inertia of aircraft.	Staff of Structures Dept.	June 1948	U	
29	Potentialities of research into detail design.	J. Taylor	June 1948	R	
30	Load diffusion at an inter spar opening - theoretical methods of analysis compared with strain measurements on a large wing.	D.C. Allen	June 1948	U	Aero Research Council. R&M No.2664.
31	The diffusion of load into a panel bounded by constant stress booms and a transverse beam.	E.H. Mansfield	Aug. 1948	U	Aero Research Council. R&M No.2729.
32	Flexible supports for the ground resonance testing of aircraft.	W.G. Molyneux	Sept. 1948	U	Aircraft Eng. January 1958.
33	A review of operational research with V-g recorders.	D.T. Jones	Oct. 1948	U	

No.	Title of Report	Author(s)	Date	Security	External Publication
34 Aero 2300	Report of the R.A.E. advanced fighter project group.	Staff of R.A.E.	Nov. 1948	R	
35 Chem. 453	Design of "Perspex" components for aircraft. A symposium held at R.A.E. November, 1948.	Staff of R.A.E.	Jan. 1949	R	
36	An outline of the principles of aircraft strength testing.	P.B. Walker	Dec. 1948	U	Abbreviated versions published in Journal of the Institute of Structural Eng. Nov. 1948.
37	Flutter problems of high speed aircraft	E.G. Broadbent	April 1949	U	Aero Research Council. R&M No.2828.
38	The analysis of V-g records.	R.D. Starkey	May 1949	U	
39	Effects of rate and duration of loading on the strength of aircraft structures.	K.D. Raithby	May 1949	U	Aero Research Council. R&M No.2736.
40	A study of the critical speeds and aero-elastic behaviour under sudden loads of the general and "aero-isoclinic" swept wing.	J.C. Houbolt	June 1949	R.D.	
41	An investigation of the anti-symmetrical body freedom from flutter for swept wing aircraft.	J.C. Houbolt	June 1949	R.D.	
42	The initial buckling of a long and slightly bowed panel under combined shear and normal pressure.	E.H. Brown H.G. Hopkins	June 1949	U	Aero Research Council. R&M No.2766.

No.	Title of Report	Author(s)	Date	Security	External Publication
43	Torsional vibration investigations on the Musketeer engine.	M.O.W. Wolfe W. Davidson E. Downham	June 1949	U	Aero Research Council. Current Paper No.34.
44	Records of major strength tests.	P.B. Walker	July 1949	U	Aero Research Council. R&M No.2790.
45	A comparison of the endurance of various aircraft structures under fluctuating loading.	W.A.P. Fisher	July 1949	C	
46 Aero 2331	Some problems of the aero-isoclinic wing.	Staffs of Aero and Structures Departments.	July 1949	U/C	
47	Notes on the dynamic response of an aircraft to gusts and on the variation of gust velocity along the flight path with special reference to measurements made in Lancaster P.D.119.	A. Burns	Sept. 1949	U	Aero Research Council. R&M No.2759.
48	Stresses in built-up beams due to an abrupt change in shear stress at a loading section.	J. Taylor	Aug. 1949	U	Aero Research Council. R&M No.2775.
49	A simple method of allowing for shear deflections in calculating the vibration modes and frequencies of structures.	D. Williams	Aug. 1949	R	
50	Data on flight loads obtained with Miller recording equipment with particular reference to test flights in Lancaster P.D.119.	A. Burns	Sept. 1949	U	Aero Research Council. Current Paper No.48.
51	The electronic simulator for the solution of flutter and vibration problems.	F. Smith	Sept. 1949	U	Aero Research Council. Current Paper No.26.

No.	Title of Report	Author(s)	Date	Security	External Publication
52	Elasticity of a sheet reinforced by stringers and skew ribs, with applications to swept wings.	E.H. Mansfield	Dec. 1949	U	Aero Research Council. R&M No. 2758.
53	Proposals for a new structures laboratory.	P.B. Walker	Nov. 1949	C	
54	Strength tests on Alclad faced sandwich panels with non-metallic cores.	J.K. Oaks R.H. Cross	Nov. 1949	R	
55	Recent developments in method of strength testing pressurised fuselages.	A.W. Hotson	Dec. 1949	U	
56	Undercarriage strength for yawed and banked landings.	M.E. Burt	Dec. 1949	R	
57	Criteria for the prevention of flutter of tab systems.	H. Wittmeyer H. Templeton	Jan. 1950	U	Aero Research Council. R&M No. 2825.
58	The flutter of swept and unswept wings with fixed root conditions. Part I Wing tunnel experiments. Part II Comparison of experiment and theory. Part III Wing torsional stiffness criterion.	W.G. Molyneux	Jan. 1950	U	Aero Research Council. R&M No. 2796.
59	Fatigue tests on Meteor tailplane.	J.K. Oaks	Jan. 1950	R	
60	Some notes on the Hill aero-isoclinic principle for swept back wings, from the point of view of torsional stiffness and aero elastic behaviour.	D. Williams	Jan. 1950	U	
61	General consideration of the flutter of swept wings.	P.F. Jordan	Feb. 1950	R	
62	A new test frame for large aircraft.	P.B. Walker	Feb. 1950	R	
63	Design and material development in the U.S.A. in optical and electrical transparencies for aircraft.	W.H. Hall F.G.J. Brown	Oct. 1950	C.D.	

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No.	Title of Report	Author(s)	Date	Security	External Publication
64	An experimental investigation of the effect of engine loads on wing structures.	J.L. Reddaway	April 1950	U	
65	Characteristics required for accelerometers for measuring low frequency accelerations in flight.	J. Taylor	May 1950	U	
66	Destructive energy in aircraft pressure cabins.	P.B. Walker	May 1950	U	Journal Royal Aeronautical Soc. April. 1950.
67	Flutter experiments with freely falling models at high subsonic speeds.	W.G. Molyneux E.W. Chapple	May 1950	R	
68	Symmetric flutter characteristics of a hypothetical delta wing.	D.L. Woodcock	May 1950	U	Aero Research Council. R&M No.2839.
69	Control surface flutter with the stick free.	H. Templeton	May 1950	U	Aero Research Journal. R&M No.2824.
70	The experimental approach to the problems of shaft whirling.	E. Downham	June 1950	U	Aero Research Council. R&M No.2768.
71	A new test frame for fuselages with and without pressure cabins.	P.B. Walker	May 1950	R	
72	Technique for flutter investigations using ground launched rockets.	W.G. Molyneux F. Ruddlesden	June 1950	U	Aero Research Council. R&M No.2944.
73	Wind tunnel technique for flutter investigations on swept wings with body freedoms.	P.F. Jordan F. Smith	Sept. 1950	U	Aero Research Council. R&M No.2893.
74	The design of a simple electronic flutter simulator.	F. Smith W.D.T. Hicks	July 1950	U	Journal Royal Aeronautical Soc. June 1953.

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75	Natural frequencies and modes of a model delta aircraft.	D.R. Gaukroger	June 1950	U	Aero Research Council. R&M No.2762.
76	Dynamic fin and rudder loads in yawing manoeuvres.	T. Czaykowski	June 1950	U	
77	The stressing of wing ribs	P.B. Hovell J.L. Reddaway	Aug. 1950	U	
78	Design and use of counting accelerometers.	J. Taylor	June 1950	U	Aero Research Council. R&M No.2812.
79	Fatigue of aircraft structures.	P.B. Walker	June 1950	R	Journal Royal Aeronautical Soc. August 1949.
80	Prediction of undercarriage weights.	M.E. Burt E.L. Ripley	June 1950	R	
81	Review of gust data from civil aircraft records.	R.D. Starkey	Aug. 1950	U	
82	Some preliminary model experiments on the whirling of shafts.	E. Downham	June 1950	U	Aero Research Council. R&M No.2768.
83	Some interesting aspects of structural research.	P.B. Walker	June 1950	C	
84	Pre-tensioning as a means of preventing fatigue in bolts.	W.A.P. Fisher R.H. Cross G.M. Norris	July 1950	U	Aircraft Eng. June 1952 p.160.
85	The rolling power of an elastic swept wing.	E.G. Broadbent	July 1950	U	Aero Research Council. R&M No.2857.
86	Tables of functions for evaluation of wing and control surface flutter derivatives for incompressible flow.	I.T. Minhinnick	July 1950	R	

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87	Subsonic aerodynamic flutter derivatives for wings and control surfaces (compressible and incompressible flow).	I.T. Minhinick	July 1950	U	
Corrigenda and addenda (Feb. 52)					
88	Fatigue of specimens from "Z" Section, D.T.D. 364 extrusions.	S/L C.N.S. Pringle	Aug. 1950	U	
89	Wing tunnel flutter tests on a model delta wing under fixed and free root conditions.	D.R. Gaukroger E.W. Chapple A. Milln	Sept. 1950	U	Aero Research Council. R&M No. 2826.
90	Neutral holes in plane sheet:- reinforced holes which are elastically equivalent to the uncut sheet.	E.H. Mansfield	Sept. 1950	U	Aero Research Council. R&M No. 2815.
91	V-g records from operational fighter aircraft.	R.D. Starkey	Nov. 1950	C-D	
92	Fighter strength factors.	E.A. Poulton	Oct. 1950	U/C	
93	A method of fuselage structure weight prediction.	E.L. Ripley	Nov. 1950	R	
94	A simple method for tail unit structure weight prediction.	E.L. Ripley	Nov. 1950	R	
95	The strength of some welded joints in steel sheet material to specification D.T.D. 124A.	F. Clifton J. Ellis	Dec. 1950	U	
96	A new condition for fixing design strengths for aircraft materials and structural elements.	F. Clifton	Dec. 1950	U	
97	The critical whirling speeds and natural vibrations of a shaft carrying a symmetrical rotor.	E. Downham	Dec. 1950	U	Aero Research Council. R&M No. 2854.

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98	The stress distribution in a swept-back box-beam with perpendicular ribs.	P.B. Hovell	Dec. 1950	U	Aero Research Council. R&M No.2837.
99	Factual data on aircraft structure weights.	D.C. Appleyard D.R. Lewis	Jan. 1951	R	
100	Catalogue of Structures Department Reports with alphabetical list of authors.	W.E. Wood	Feb. 1951	R	
101	A simplified treatment of a fixed root swept wing built on Hill's isoclinic principle.	D. Williams	Jan. 1951	U	Aero Research Council. R&M No.2870.
102	Fatigue nomenclature for aircraft structural workers.	P.B. Walker R.B. Heywood	Feb. 1951	R	
103	The theory of torsional vibrations of a four-boom thin walled cylinder of rectangular cross section.	E.H. Mansfield	March 1951	U	Aero Research Council. R&M No.2867.
104	Effects of some design characteristics on aero-plane landing accidents.	M.E. Burt	June 1951	C	
105	Analysis of strength tests on aluminium-silicon castings to Specification B.S.2.L.33.	F. Clifton A.J. Beard	April 1951	C	
106	The geared elevator tab and tail unit stiffness requirements.	Ll.T. Niblett	April 1951	U	Aero Research Council. R&M No.2848.
107	Relationship between bearing strength and hardness for metallic structural elements.	E.L. Ripley A.J. Beard	April 1951	U	
108	Fatigue tests on typical two spar light alloy structure (Meteor 4 tail planes) under reversed loading.	K.D. Raithby	May 1951	U	Aero Research Council. Current Paper No.88.
109	A method of wing weight prediction.	E.L. Ripley	May 1951	R	

No.	Title of Report	Author(s)	Date	Security	External Publication
110	Some aircraft structural fatigue failures and their significance to designers.	M.A.P. Fisher	May 1951	R	
111	Structural aspects of suction wings.	E.H. Mansfield	June 1951	U	Aero Research Council. Current Paper No.87
112	Shear tests on material to Specifications B.S.S. S.1, D.T.D.126A, D.T.D.423B and B.S.970 (EN.24, EN.25, EN.26).	E.L. Ripley	July 1951	U	
113	The variation of tensile strength in large aluminium alloy extruded bar.	F.H. Jones	Nov. 1951	U	
114	Stress concentrations at a cut-out in a swept wing.	E.H. Mansfield	July 1951	U	Aero Research Council. R&M No.2823.
115	The Eigensolutions of the finite segments of the Hilbert Matrix.	P.F. Jordan	Aug. 1951	U	
116	Weight prediction of ailerons and landing flaps.	M.E. Burt	Sept. 1951	R	
117	A review of vertical velocity in deck landings obtained from film analysis.	H.G. Spurr	June 1952	C	
118	Flutter tests on unswept wings using ground launched rockets.	W.G. Molyneux R. Ruddlesden P.J. Cutt	Nov. 1951	U	Aero Research Council. R&M No.2944.
119	Aspects of deck landing which affect undercarriage design.	M.E. Burt H.G. Spurr	Jan. 1952	C	
120	Determination of the stress distribution in reinforced monocoque structures. Part I - A theory of flat sided structures.	L.S.D. Morley	Dec. 1951	U	Aero Research Council. R&M No.2879.

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121	The effect of tight clamping on the fatigue strength of joints.	W.A.P. Fisher W.J. Winkworth	Feb. 1952	U	Aero Research Council. R&M No.2873.
122	Prediction of fuselage and hull structure weights.	M.E. Burt J. Phillips	March 1952	R	
123	Wind tunnel tests on symmetrical flutter of swept-back wings including the tailplane effect.	D.R. Gauckroger	April 1952	U	Aero Research Council. R&M No.2911.
124	Design loads for rudder geared tabs and trim tabs.	J.L. Reddaway	April 1952	R	
125	The theory and prevention of aeroplane nose-wheel shimmy.	D. Williams	Aug. 1952	U	
126	Vibration and flutter of aircraft aerials.	W.H. Johnson	July 1952	U	Aero Research Council. Current Paper No.146.
127	Improvements in the fatigue strength of joints by the use of interference fits.	W.A.P. Fisher W.J. Winkworth	April 1952	U	Aero Research Council. R&M No.2874.
128	The vibrations of a swept wing.	N.S. Heaps	April 1952	U	Aero Research Council. Current Paper No.141.
129	The fatigue situation for civil aircraft.	P.B. Walker	May 1952	U	The Aeroplane 25.4.1952.
130	Effects of design speed and normal acceleration on aircraft structure weight.	M.E. Burt	June 1952	U	Aero Research Council. Current Paper No.490.

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131 Aero 2462	An investigation into an aircraft to fly at a Mach number of 2.0.	C.H.E. Warren J. Poole D.C. Appleyard	June 1952	R	
132	Aerodynamic derivatives for a delta wing oscillating in elastic modes.	D.L. Woodcock	July 1952	U	Aero Research Council. Current Paper No.170.
133	Empirical data on fatigue of aircraft structural joints.	W.A.P. Fisher	Aug. 1952	R	
134	Dynamic landing loads on inner engines of Shackleton.	A. Burns	Sept. 1952	R	
135	The aerodynamic effects of aspect ratio on flutter of unswept wings.	W.G. Molyneux E.W. Chapple	Nov. 1952	U	Aero Research Council. RAM No.2942.
136	On the post buckling behaviour of stiffened plane sheet under shear.	E.H. Mansfield	Nov. 1952	U	Aero Research Council. RAM No.3073.
137	Some identities on structural flexibility after buckling.	E.H. Mansfield	Nov. 1952	U	Aero Quarterly Vol.IX p.300 August 1958.
138	Determination of the stress distribution in reinforced monocoque structures. Part III - A theory of swept wings where the ribs are in the line of flight.	L.S.D. Morley	Nov. 1952	U	Aero Research Council. RAM No.2967.
139	The effect of rolling on fin-and-rudder loads in yawing manoeuvres.	D.R. Puttock	Jan. 1953	U	Aero Research Council. Current Paper No.153.
140	The buckling shear stress of simply-supported infinitely-long plate with transverse stiffeners.	P.W. Kleeman	Jan. 1953	U	Aero Research Council. RAM No.2971.

No.	Title of Report	Author(s)	Date	Security	External Publication
141	Aerodynamic flutter coefficients for sub-sonic, sonic and supersonic flow (Linear two dimensional theory).	P.F. Jordan	April 1953	U	
142	The technique of flutter calculations.	H. Templeton	April 1953	U	Aero Research Council. Current Paper No.172.
143	Wind tunnel tests on antisymmetric flutter of swept back wings with rolling body freedom.	D.R. Gaukroger	March 1953	U	Aero Research Council. R&M No.2911.
144	A water-borne runway.	D. Williams	April 1953	U	
145	Effects of low temperature on the fatigue strength of a two spar light alloy structure (Meteor 4 tailplane).	K.D. Raithby	April 1953	R	
146	Design criterion for fatigue of wings.	P.B. Walker	May 1953	U	Journal Royal Aeronautical Soc. January 1953.
147	A symposium on the flutter problem in aircraft design.	H. Templeton G.R. Brooke	May 1953	C	
148	The harmonically oscillating wing with finite vortex trail.	P.F. Jordan	July 1953	U	
149	Estimation of the fatigue life of a transport aircraft.	P.B. Walker	July 1953	U	Journal Royal Aeronautical Soc. October 1953.
150	Fatigue testing of a large wing by the resonance method.	K.D. Raithby	Aug. 1953	R	
151	Use of a geared flap to prevent wing flutter.	H. Templeton	Sept. 1953	C	

No.	Title of Report	Author(s)	Date	Security	External Publication
152	The R.A.E. electronic simulator for flutter investigations in six degrees of freedom or less.	F. Smith W.D.T. Hicks	Sept. 1953	U	Aero Research Council. RAM No. 3101.
153	A large deflection theory for thin plates.	E.H. Mansfield P.W. Kleeman	Oct. 1953	U	Aircraft Eng. Vol. XXVII p.102-108. April 1955.
154	Stress analysis of triangular cantilever plates.	E.H. Mansfield P.W. Kleeman	Oct. 1953	U	Aircraft Eng. Vol. XXVII p.287-291. Sept. 1955.
155	Flutter tests on swept back wings using ground launched rockets.	W.G. Molyneux F. Ruddlesden	Oct. 1953	U	Aero Research Council. RAM No. 2949.
156	Aircraft structural research - a critical survey.	D. Williams	Oct. 1953	U	
157	Wind tunnel flutter tests on a delta wing with an all moving tip control surface.	D.R. Gaukroger	Oct. 1953	U	Aero Research Council. RAM No. 2978.
158 Met. 77 Chem. 497	Examination of parts of wreckage of Viking aircraft VP-YES.	P.B. Walker L.G. Carpenter N.J.L. Megson	Nov. 1953	R	
159	Wind tunnel tests on the effect of a localised mass on the flutter of a swept back wing with fixed root.	D.R. Gaukroger	Dec. 1953	U	Aero Research Council. RAM No. 3141.
160	The strength properties of some light alloy casting material.	F. Clifton	Jan. 1954	R	
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No.	Title of Report	Author(s)	Date	Security	External Publication
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No.	Title of Report	Author(s)	Date	Security	External Publication
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No.	Title of Report	Author(s)	Date	Security	External Publication
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RESTRICTED

No.	Title of Report	Author(s)	Date	Security	External Publication
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RESTRICTED

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No.	Title of Report	Author(s)	Date	Security	External Publication
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RESTRICTED

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RESTRICTED

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RESTRICTED

No.	Title of Report	Author(s)	Date	Security	External Publication
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No.	Title of Report	Author(s)	Date	Security	External Publication
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No.	Title of Report	Author(s)	Date	Security	External Publication
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ALPHABETICAL LIST OF AUTHORS AND CO-AUTHORS

Author	Title of Report	No.	External publication
Allen, D.C.	Load diffusion at an inter-spar opening - theoretical methods of analysis compared with strain measurement on a large wing.	30	Aero Research Council R&M No.2664
Appleyard, D.C.	Factual data on aircraft structures weights.	99	
	An investigation into an aircraft to fly at a Mach number of 2.0.	131 Aero 2462	
Atkinson, R.J.	Investigation into the accident to the Viscount aircraft G-ALME on 14th March, 1957.	230	
	Behaviour of skin fatigue cracks at the corners of windows in a Comet I fuselage.	257	
Bateman, E.H.	On the use of a tensor transformation to describe the rotation of a rigid body with application to a wing of variable sweep and a retractable undercarriage.	190	
Beard, A.J.	Analysis of strength tests on aluminium silicon castings to Specification B.S.S. 2L 33.	105	
	Relationship between bearing strength and hardness, for metallic structural elements.	107	
Broadbent, E.G.	Aileron reversal and wing divergence of swept wings.	9	Aero Research Council R&M No.2817
	Flutter problems of high speed aircraft.	37	Aero Research Council R&M No.2828
	The rolling power of an elastic swept wing.	85	Aero Research Council R&M No.2857
	Elevator flutter involving two tabs.	161	

Author	Title of Report	No.	External publication
Broadbent, E.G.	The effect of structural damping on binary flutter.	212	Aero Research Council R&M No.3169
	Flutter of an all-moving tailplane.	226	Aero Research Council R&M No.3284
	Flutter of an untapered wing allowing for thermal effects.	249	Aero Research Council Current Paper No.442
Brooke, G.R.	A symposium on the flutter problem in aircraft design.	147	
Brown, E.H.	The initial buckling of a long slightly bowed panel under combined shear and normal pressure.	42	Aero Research Council R&M No.2766
Brown, F.G.J.	Design and material development in the U.S.A. in optical and electrical transparencies for aircraft.	63 Chem 468	
	The strength of annealed and heat treated glass.	167	
	Report on visit to the U.S.A. to attend the sixth annual A.I.A. - W.A.D.C. conference on transparencies and to discuss problems relating to aircraft transparencies.	194 Chem 504	
Bullen, N.I.	A method of introducing artificial structural damping for controlling the torsional oscillations of a wing.	199	
	The sampling errors of turbulence measurements.	208	Aero Research Council R&M No.3063
	A note on test factors.	215	Aero Research Council R&M No.3166
	The variation of gust frequency with gust velocity and altitude.	216	Aero Research Council Current Paper No.324
Burns, A. (Mrs.)	The dynamic landing loads of flying boats with special reference to measurements made on Sunderland T.X. 293.	17	Aero Research Council R&M No.2629

Author	Title of Report	No.	External publication
Burns, A. (Mrs.)	Notes on the dynamic response of an aircraft to gusts and on the variation of gust velocity along the flight path, with special reference to measurements made in Lancaster P.D. 119.	47	Aero Research Council R&M No.2759
	Data on flight loads obtained with Miller recording equipment with particular reference to test flights in Lancaster P.D. 119.	50	Aero Research Council Current Paper No.48
	Dynamic landing loads on inner engines of Shackleton.	134	
Burt, M.E.	Undercarriage strength for yawed and banked landings.	56	
	Prediction of undercarriage weights.	80	
	Effects of some design characteristics on aeroplane landing accidents.	104	
	Weight prediction of ailerons and landing flaps.	116	
	Aspects of deck landing which affect undercarriage design.	119	
	Prediction of fuselage and hull structure weights.	122	
	Effects of design speed and normal acceleration on aircraft structure weight.	130	Aero Research Council Current Paper No.490
	Weight prediction for wings of box construction.	186	
	Structural weight estimations for novel configurations.	270	Journal Royal Aeronautical Society Vol.66 No.613, Jan 1962
Butler, A.R.	The need for load measurement in flight.	282	
	Records of static pressure tests on pressure cabins.	187	
Campbell, E.C. (Miss)	A comparison of methods for calculating the response of a beam to a suddenly applied load.	166	

Author	Title of Report	No.	External publication
Capey, E.C.	Transient temperature distributions in an insulated multi-spar wing.	246	Aircraft Eng. Oct 1961, page 282
Carpenter, L.G.	Examination of parts of wreckage of Viking aircraft VP-YEH.	158 Met.77 Chem 497	
Chapple, E.	Flutter experiments with freely falling models at high subsonic speeds.	67	
	Wind tunnel flutter tests on a model delta wing under fixed and free root conditions.	89	Aero Research Council R&M No.2826
	The aerodynamic effects of aspect ratio on flutter of unswept wings.	135	Aero Research Council R&M No.2942
	A comparison of the measured and predicted flutter characteristics of a series of delta wings of different aspect ratios.	180	Aero Research Council R&M No.3071
	Wind tunnel tests on the effect of body freedoms on the flutter of a model wing carrying a localized mass.	204	Aero Research Council R&M No.3081
	The aerodynamic effects on flutter of wing section and thickness.	207	
Clarke, H. (Miss)	Elevator flutter involving two tabs.	161	Aero Research Council R&M No.3210
Cleaver, W/C P.C.	The strength of tubes under uniform external pressure.	193	Aero Research Council Current Paper No.253
Clifton, F.	The strength of some welded joints in steel sheet material to specification D.T.D. 124A	95	
	A new condition for fixing design strengths for aircraft materials and structural elements.	96	
	Analysis of strength tests on aluminium silicon castings to specification B.S.S. 2L 33.	105	

Author	Title of Report	No.	External publication
Clifton, F.	The strength properties of some light alloy casting material.	160	
Coles, W.A.	Wind tunnel tests on the effects of an added mass on the flutter of a model delta wing. Part A Fixed root flutter tests. Part B Anti-symmetric flutter tests. Part C Symmetric flutter tests.	240	Aero Research Council R&M No.3255
Crisp, J.D.C.	Wing elevon-tab flutter of the Boulton and Paul Delta P. 120.	165	
Cross, R.H.	Strength tests on Alclad faced sandwich panels with non-metallic cores.	54	
	Pretensioning as a means of preventing fatigue in bolts.	84	Aircraft Eng. June 1952, P.160
Crowther, F.	Experimental investigation into plate web spars under shear - Part III - spar with 16 swg web.	7	
	Experimental investigation into plate web spars under shear - Part IV - destruction tests on spars with 24, 20 and 16 swg webs.	8	
Curran, J.K.	Aerodynamic derivative measurements on a rectangular wing of aspect ratio 3.3.	235	Aero Research Council R&M No.3171.
	Aerodynamic derivative measurements on a wing with a horn-balanced control surface.	263	Aero Research Council R&M No.3307
	Rolling power tests on an elastic model wing in low speed flow.	280	Aero Research Council R&M No.3362
Cutt, P.J.	Flutter tests on unswept wings using ground launched rockets.	118	Aero Research Council R&M No.2944
Czaykowski, T.	Dynamic fin and rudder loads in yawing manoeuvres.	76	
	Loading conditions of tailed aircraft in longitudinal manoeuvres.	177	Aero Research Council R&M No.3001

Author	Title of Report	No.	External publication
Davidson, W. (Mrs.)	Torsional vibration investigations in the Muskateer engine.	43	Aero Research Council Current Paper No.34
Davies, D.E.	The velocity potential on triangular and related wings with subsonic leading edges oscillating harmonically in supersonic flow.	244	Aero Research Council R&M No.3229
	The aerodynamic forces on an oscillating two-dimensional wing in accelerated supersonic flight.	262	Aero Research Council R&M No.3299
	Calculation of unsteady generalised air forces on a thin wing oscillating harmonically in subsonic flow.	290	
	Generalised aerodynamic forces on a T-tail oscillating harmonically in subsonic flow.	295	
Downham, E.	Torsional vibration characteristics of the Centaurus VIIC engine.	22	
	Torsional vibration investigations on the Muskateer engine.	43	Aero Research Council Current Paper No.34
	The experimental approach to the problems of shaft whirling.	70	Aero Research Council R&M No.2768
	Some preliminary model experiments on the whirling of shafts.	82	Aero Research Council R&M No.2768
	The critical whirling speeds and natural vibration of a shaft carrying a symmetrical rotor.	97	Aero Research Council R&M No.2854
	The influence of plain bearings on shaft whirling.	192	
Ellis, J.	The strength of some welded joints in steel sheet material to specification D.T.D. 124A	95	
	The strength of annealed and heat treated glass.	167	
Ewing, H.G.	Comparative flutter tests on 2, 3, 4 and 5 blade propellers.	18	Aero Research Council R&M No.2634

Author	Title of Report	No.	External publication
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Fine, M.	The effect of uniformly spaced flexible ribs on the stresses due to self equilibrating systems applied to long thin walled cylinders.	6	Aero Research Council R&M No.2832
Fisher, W.A.P.	Experimental verification of the photo-elastic stress values in the interior of a Catalin model when using stress freezing method.	4	
	A comparison of the endurance of various aircraft structures under fluctuating loading.	45	
	Pretensioning as a means of preventing fatigue in bolts.	84	Aircraft Eng. June 1952, p.160
	Some aircraft structural fatigue failures and their significance to designers.	110	
	The effect of tight clamping on the fatigue strength of joints.	121	Aero Research Council R&M No.2873
	Improvements in the fatigue strength of joints by the use of interference fits.	127	Aero Research Council R&M No.2874
	Empirical data on fatigue of aircraft structural joints.	133	
	Experimental correlation between the endurance of a wing spar joint and the ratio between 0.1 per cent proof and ultimate tensile strengths of the material.	205	
	The effect of contact angle on the fatigue life of steel bolts in tension (accident investigation for Viscount aircraft G-ALAE).	234	
Gaukroger, D.R.	Comparative flutter tests on 2, 3, 4 and 5 blade propellers.	18	Aero Research Council R&M No.2634

Author	Title of Report	No.	External publication
Gaukroger, D.R.	Natural frequencies and modes of vibration of a model Delta aircraft.	75	Aero Research Council R&M No.2762
	Wind tunnel flutter tests on a model delta wing under fixed and free root conditions.	89	Aero Research Council R&M No.2826.
	Wind tunnel tests on asymmetrical flutter of swept back wings including the tailplane effect.	123	Aero Research Council R&M No.2911
	Wind tunnel tests on anti-symmetric flutter of swept back wings with rolling body freedom.	143	Aero Research Council R&M No.2911
	Wind tunnel flutter tests on a delta wing with an all moving tip control surface.	157	Aero Research Council R&M No.2978
	Wind tunnel tests on the effect of a localised mass on the flutter of a swept back wing with fixed root.	159	Aero Research Council R&M No.3141
	Wind tunnel tests on anti-symmetric flutter of a delta wing with rolling body freedom.	174	Aero Research Council Current Paper No.259
	Wind tunnel tests on the effect of body freedoms on the flutter of a model wing carrying a localised mass.	204	Aero Research Council R&M No.3081
	A theoretical treatment of the flutter of a wing with a localised mass.	213	Journal Royal Aeronautical Society Feb 1959
	Body freedom flutter of ground launched rocket models at supersonic and high subsonic speeds.	227	Aero Research Council R&M No.3189
	Flutter characteristics of a wing carrying a flexibly mounted mass.	261	Aero Research Council R&M No.3330
Grinstead, F.	Rolling power tests on an elastic model wing in low speed flow.	280	Aero Research Council R&M No.3362
	Prediction of wing structure weight.	15	

Author	Title of Report	No.	External publication
Grinsted, F.	Simple procedure for predicting the weights of wing, fuselage, and tail unit structures.	24	
Guyett, P.R.	Measurements of pitching moment derivatives for a series of rectangular wings at low wind speeds.	185	Aero Research Council Current Paper No.249
	Supersonic wind tunnel flutter tests of two rectangular wings.	206	Aero Research Council R&M No.3080
	Aerodynamic derivative measurements on a rectangular wing of aspect ratio 3.3.	235	Aero Research Council R&M No.3171
	Aerodynamic derivative measurements on a wing with a horn-balanced control surface.	263	Aero Research Council R&M No.3307
	Measurements of aerodynamic derivatives on a wing with a series of tip bodies.	285	Aero Research Council R&M No.3381
Hall, H.	The aerodynamic effects of aspect ratio and sweep back on wing flutter.	175	Aero Research Council R&M No.3011
	A comparison of the measured and predicted flutter characteristics of a series of delta wings of different aspect ratios.	180	Aero Research Council R&M No.3071
	The effect of wing torsion on aileron-tab flutter.	203	Aero Research Council R&M No.3072
	The aerodynamic effects on flutter of wing section and thickness.	207	
	Wind tunnel tests on the effects of an added mass on the flutter of a model delta wing.	240	Aero Research Council R&M No.3255
	Part A Fixed root flutter tests.		
	Part B Anti-symmetric flutter tests.		
	Part C Symmetric flutter tests.		
	Wind tunnel tests on the flutter of a swept and unswept wing with ailerons.	253	Aero Research Council Current Paper No.478

Author	Title of Report	No.	External publication
Hall, W.H.	Design and material developments in the U.S.A. in optical and electrical transparencies for aircraft.	63 Chem 468	
Heaps, N.S.	The vibrations of a swept wing.	128	Aero Research Council Current Paper No.141
	Transient thermal stresses in a flat plate due to non-uniform heat transfer across one surface.	164	
Heath-Smith, J.R.	Turbulence encountered by Comet 1 aircraft.	179	Aero Research Council Current Paper No.248
Heywood, R.B.	Fatigue nomenclature for aircraft structural workers.	102	
	The influence of pre-loading on the fatigue life of aircraft components and structures.	182	Aero Research Council Current Paper No.232
	Correlated fatigue data for aircraft structural joints.	184	Aero Research Council Current Paper No.227
Hicks, W.D.T.	The design of a simple electronic flutter simulator.	74	Journal Royal Aeronautical Society June 1953
	The R.A.E. electronic simulator for flutter investigations in six degrees of freedom or less.	152	Aero Research Council R&M No.3101
Hopkins, H.G.	The initial buckling of a long slightly bowed panel under combined shear and normal pressure.	42	Aero Research Council R&M No.2766
Hotson, A.W.	Recent developments in methods of strength testing pressurised fuselages.	55	
Houbolt, J.C.	A study of the critical speeds and aero-elastic behaviour under sudden loads of the general and "aero-isoclinic" swept wing.	40	
	An investigation of the anti-symmetrical body freedom from flutter for swept wing aircraft.	41	

Author	Title of Report	No.	External publication
Hovell, P.B.	The stressing of wing ribs.	77	
	The stress distribution in a swept back box-beam with perpendicular ribs.	98	Aero Research Council R&M No.2837
	Records of static pressure tests on pressure cabins.	187	
Johnson, W.H.	Vibration and flutter of aircraft aeriels.	126	Aero Research Council Current Paper No.146
Jones, D.T.	Interim report on results obtained from V-g recorders fitted to Meteor III aircraft.	10	
	The relationship of achieved maximum speeds to service maximum speed limitations for some service aircraft.	20	
	Speeds and normal accelerations of Boeing Clipper aircraft on North and South Atlantic routes.	25	Aero Research Council R&M No.2633
	A review of operational research with V-g recorders.	33	
	Power spectrum analysis of gust loads on the Comet wing and tailplane.	211	
Jones, F.H.	The variation of tensile strength in large aluminium alloy extruded bar.	113	
Jordan, P.F.	General consideration of the flutter of swept wings.	61	
	Wind tunnel techniques for flutter investigations on swept wings with body freedoms.	73	Aero Research Council R&M No.2893
	The Eigen solutions of the finite segments of the Hilbert Matrix.	115	
	Aerodynamic flutter co-efficients for subsonic, sonic and supersonic flow. (Linear two-dimensional theory.)	141	
	The harmonically oscillating wing with finite vortex trail.	148	

Author	Title of Report	No.	External publication
Kettlewell, J.	Comparative flutter tests on 2, 3, 4 and 5 blade propellers.	18	Aero Research Council R&M No.2634
Kirkby, W.T.	Comparative flight flutter tests using the "decaying oscillation" and "amplitude response" techniques.	248	Part II of Aero Research Council R&M No.3247
Kleeman, P.W.	The buckling shear stress of simply supported infinitely long plate with transverse stiffeners.	140	Aero Research Council R&M No.2971
	A large deflection theory for thin plates.	153	Aircraft Eng Vol. XXVII p.102 - 108 April 1955
	Stress analysis of triangular cantilever plates.	154	Aircraft Eng Vol. XXVII p.287 - 291 Sept 1955
Lean, D.	Control characteristics of the Viscount aircraft with flap asymmetry (accident investigation for Viscount aircraft G-ALWE).	232 Aero 2594	
Lewis, D.R.	Factual data on aircraft structure weights.	99	
Longson, J. (Miss)	Some fatigue characteristics of a two spar light alloy structure. (Meteor 4 tail plane.)	195	Aero Research Council Current Paper No.258
	A photographic study of the origin and development of fatigue fractures in aircraft structures.	267	
Luscombe, P.D.R.	Comparative flight flutter tests using the "decaying oscillation" and "amplitude response" techniques.	248	Part II of Aero Research Council R&M No.3247
McKenzie, K.I.	A Deuce programme for the solution of two-dimensional heat-flow problems.	241	Aero Research Council Current Paper No.417
	The buckling of a pressurised stiffened cylinder under axial load.	247	Aero Research Council R&M No.3198
	The leading edge buckling of a thin built-up wing due to aerodynamic heating.	259	Aero Research Council R&M No.3295

Author	Title of Report	No.	External publication
McKenzie, K.I.	The shear stiffness of a corrugated web.	275	Aero Research Council R&M No.3342
Mansfield, E.H.	The effect of uniformly spaced flexible ribs on the stresses due to self equilibrating systems applied to long thin walled cylinders.	6	Aero Research Council R&M No.2832
	The diffusion of load into a semi-infinite sheet (Part I).	11	Aero Research Council R&M No.2670.
	Generalised Fourier series and the roots of the governing transcendental equations.	12	
	$\left. \begin{array}{l} \tan \\ \cot \end{array} \right\} r + Cr = 0$		
	The effect of spanwise rib boom stiffness on the stress distribution near a wing cut out.	13	Aero Research Council R&M No.2663
	The diffusion of load into a semi-infinite sheet (Part II).	27	Aero Research Council R&M No.2670
	The diffusion of load into a panel bounded by constant stress booms and a transverse beam.	31	Aero Research Council R&M No.2729
	Elasticity of a sheet reinforced by stringers and skew-ribs, with applications to swept wings.	52	Aero Research Council R&M No.2758
	Neutral holes in plane sheet: reinforced holes which are elastically equivalent to the uncut sheet.	90	Aero Research Council R&M No.2815
	The theory of torsional vibrations of a four boom thin walled cylinder of rectangular cross section.	103	Aero Research Council R&M No.2867
	Structural aspects of suction wings.	111	Aero Research Council Current Paper No.87
	Stress concentrations at a cut-out in a swept wing.	114	Aero Research Council R&M No.2823

Author	Title of Report	No.	External publication
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	Combined flexure and torsion of a class of thin heated wings: A large deflection analysis.	237	Aero Research Council R&M No.3195
	Leading edge buckling due to aerodynamic heating.	250	Aero Research Council R&M No.3197
	Analysis of elastic plates of variable thickness.	258	Quarterly. J. Mech Appl. Math., XV, Pt.2, 167 - 192, May 1962

Author	Title of Report	No.	External publication
Mansfield, E.H.	The effect of temperature variations in the plane and through the thickness of a circular lenticular plate.	268	Aero Research Council R&M No.3267
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Marriot, A.T.	Rolling power tests on an elastic model wing in low speed flow.	280	Aero Research Council R&M No.3362
Megson, N.J.L.	Examination of parts of wreckage of Viking aircraft VP-YEN.	158 Mot. 77 Chem 497	
Milln, A. (Miss)	Wind tunnel flutter tests on a model delta wing under fixed and free root conditions.	89	Aero Research Council R&M No.2826
Minhinnick, I.T.	Tables of functions for evaluation of wing and control surface flutter derivatives for incompressible flow.	86	
	Subsonic aerodynamic flutter derivatives for wings and control surfaces. (Compressible and incompressible flow.)	87	
	The theoretical determination of normal modes and frequencies of vibration.	197	

Author	Title of Report	No.	External publication
Minhinnick, I.T.	Tables of aerodynamic flutter derivatives for thin wings and control surfaces in two-dimensional supersonic flow.	228	Aero Research Council Current Paper No.382
Molyneux, W.G.	Flexible supports for the ground resonance testing of aircraft.	32	Aircraft Eng January 1958
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	Flutter experiments with freely falling models at high subsonic speeds.	67	
	Technique for flutter investigations using ground launched rockets.	72	Aero Research Council R&M No.2944
	Flutter tests on unswept wings using ground launched rockets.	118	Aero Research Council R&M No.2944
	The aerodynamic effects of aspect ratio on flutter of unswept wings.	135	Aero Research Council R&M No.2942
	Flutter tests on swept back wings using ground launched rockets.	155	Aero Research Council R&M No.2949
	Derivative measurements and flutter tests on a rectangular wing with a full span control surface oscillating in modes of wing roll and aileron rotation.	172	Aero Research Council R&M No.3010
	Flutter tests on some delta wings using ground launched rockets.	173	Aero Research Council R&M No.3231
	The aerodynamic effects of aspect ratio and sweep back on wing flutter.	175	Aero Research Council R&M No.3011
	Flutter of wings with localised masses.	214	Journal Royal Aero Society Oct 1957

Author	Title of Report	No.	External publication
Molyneux, W.G.	A geared flywheel balance arrangement for the prevention of control surface flutter.	224	Aero Research Council Current Paper No.365
	A criterion for the prevention of flutter.	239	
Morley, L.S.D.	Determination of the stress distribution in reinforced monocoque structures Part I - a theory of flat sided structures.	120	Aero Research Council R&M No.2879
	Determination of the stress distribution in reinforced monocoque structures. Part III a theory of swept wings where the ribs are in the line of flight.	138	Aero Research Council R&M No.2967
	On the stressing of multi-rib thin wings of low aspect ratio and rectangular plan-form.	171	Aero Research Council R&M No.3052
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	A variational method of solution for problems in plane elasticity.	293	Journal Inst. Math. Applns. 1, 76 (1965)
Moxon, D.	Aeroelastic problems of high speed aircraft.	221	
Niblett, Ll.T.	The geared elevator tab and tail unit stiffness requirements.	106	Aero Research Council R&M No.2848

Author	Title of Report	No.	External publication
Niblett, L.L.T.	Flutter calculations on a rudder with trailing-edge spoiler.	202	
Nixon, D.	Wind tunnel tests on anti-symmetric flutter of a delta wing with rolling body freedom.	174	Aero Research Council Current Paper No.259
Norris, G.M.	Pretensioning as a means of preventing fatigue in bolts.	84	Aircraft Eng June 1952 p.160
	Behaviour of skin fatigue cracks at the corners of windows in a Comet 1 fuselage.	257	
Oaks, J.K.	Strength tests on Alclad faced sandwich panels with non-metallic cores.	54	
	Fatigue tests on Meteor tailplanes.	59	
Owen, J.B.B.	Some notes on the flapping motion of rotor blades.	14	Aero Research Council Current Paper No.1
Perry, D.H.	Control characteristics of the Viscount aircraft with flap asymmetry (Accident investigation for Viscount aircraft G-ALNE.)	232 Aero 2594	
Phillips, J.	Prediction of fuselage and hull structure weights.	122	
	A method of undercarriage weight prediction.	198	
Poole, J.	An investigation into an aircraft to fly at Mach number of 2.0.	131 Aero 2462	
Pope, G.G.	Thermal stresses near the roots of rectangular wings.	254	Aero Research Council R&M No.3236
	On the flexure of thin built-up wings.	265	Aero Research Council R&M No.3283
	The buckling of plates tapered in thickness.	272	Aero Research Council R&M No.3309
	The bending under normal loading of plates tapered in planform.	273	Aero Research Council R&M No.3325

Author	Title of Report	No.	External publication
Pope, G.G.	The buckling of plates tapered in planform.	274	Aero Research Council R&M No.3324
	On the axial compression of long slightly curved panels.	291	Aero Research Council R&M No.3392
Poulton, E.A.	Fighter strength factors.	92	
Poulter, D.E.G.	Measurements of pitching moment derivatives for a series of rectangular wings at low wind speeds.	185	Aero Research Council Current Paper No.249
Pringle S/L C.N.S.	Fatigue of specimens from "Z" Sections D.T.D.364 extrusion.	88	
Puttock, D.R.	The effect of rolling on fin and rudder loads in yawing manoeuvres.	139	Aero Research Council Current Paper No.153
	Effects of elevator circuit stiffness on the loading conditions in longitudinal manoeuvres.	220	
Raithby, K.D.	Effect of rate and duration of loading on the strength of aircraft structures.	39	Aero Research Council R&M No.2736
	Fatigue tests on typical two spar light alloy structure (Meteor 4 tailplanes) under reversed loading.	108	Aero Research Council Current Paper No.88
	Effects of low temperature on the fatigue strength of a two spar light alloy structure (Meteor 4 tailplane).	145	
	Fatigue testing of a large wing by the resonance method.	150	
	Some fatigue characteristics of a two spar light alloy structure. (Meteor 4 tailplane)	195	Aero Research Council Current Paper No.258
Randall, D.G.	A theoretical determination of the flow past and the air forces on an oscillating slender delta wing with leading edge separation.	284	
	Oscillating slender wings in the presence of leading edge separation.	286	

Author	Title of Report	No.	External publication
Reddaway, J.L.	An experimental investigation of the effect of engine loads on wing structures.	64	
	The stressing of wing ribs.	77	
	Design loads for rudder geared tabs and trim tabs.	124	
Rein, J.A.	Wind tunnel tests on the flutter of a swept and unswept wing with ailerons.	253	Aero Research Council Current Paper No.478
	The effect of skin taper on the aeroelastic properties of wings.	264	
Ripley, E.L.	Prediction of undercarriage weights.	80	
	A method of fuselage structure weight prediction.	93	
	A simple method for tail unit structure weight prediction.	94	
	Relationship between bearing strength and hardness, for metallic structural elements.	107	
	A method of wing weight prediction.	109	
	Shear tests on material to specifications B.S.S. S.1, D.T.D. 126A, D.T.D. 423B and B.S. 970 (E.N. 24, E.N. 25, E.N. 26)	112	
	Wreckage analysis of Viscount aircraft G-ALWE.	231	
Ruddlesden, F.	Technique for flutter investigations using ground launched rockets.	72	Aero Research Council R&M No.2944
	Flutter tests on unswept wings using ground launched rockets.	118	Aero Research Council R&M No.2944
	Flutter tests on swept back wings using ground launched rockets.	155	Aero Research Council R&M No.2949
	Flutter tests on some delta wings using ground launched rockets.	173	Aero Research Council R&M No.3231

Author	Title of Report	No.	External publication
Russell, E.W.	Report on a visit to the U.S.A. to attend the sixth annual A.I.A.A.-A.S.D.C. conference on transparencies and to discuss problems relating to aircraft transparencies.	194 Chem 504	
Sanderson, N.	An experimental investigation into plate web spars under shear. Part III spar with 16 swg web.	7	
	An experimental investigation into plate web spars under shear. Part IV destruction tests on spars with 24, 20 and 16 swg webs.	8	
Seal, Diana E.	Aeroelastic investigation of specific aircraft with particular reference to wing stiffness.	223	
	A survey of buffeting loads.	252	
Smith, F.	The electronic simulator for the solution of flutter and vibration problems.	51	Aero Research Council Current Paper No.26
	A wind tunnel technique for flutter investigations on swept wings with body freedoms.	73	Aero Research Council R&M No.2893
	The design of a simple electronic flutter simulator.	74	Journal Royal Aeronautical Society June 1953
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Smith, G.E.	Flutter of a two-dimensional simply supported buckled panel with elastic restraint against edge displacement.	269	
Sobey, A.J.	The buckling strength of a uniform circular cylinder loaded in axial compression.	279	Aero Research Council R&M No.3366
	The estimation of stresses around unreinforced holes in infinite elastic sheets.	283	Aero Research Council R&M No.3354

Author	Title of Report	No.	External publication
Sobey, L.J.	Stress concentration factors for rounded rectangular holes in infinite sheets.	292	Aero Research Council R&M No.3407
Spurr, H.G.	A review of vertical velocity in deck landings obtained from film analysis.	117	
	Aspects of deck landing which affect undercarriage design.	119	
Starkey, R.D.	The analysis of V-g records.	38	
	The review of gust data from Civil Aircraft records.	81	
	V-g records from operational fighter aircraft.	91	
	The incidence of cracked bolts for Viscount aircraft (Accident investigation for Viscount aircraft G-ALLB.)	233	
Sterne, L.H.G.	The structural aspects of propeller design.	5	
Symmons, R.W.	Review of fighter strength.	210	
	Operational loads on fighter aircraft.	218	
Taylor, A.S.	A further investigation of the effects of longitudinal elastic camber on slender aircraft in steady symmetrical flight including estimates of the effect on shear forces and bending moments.	296	
Taylor, J.	Landing of an aircraft on a suspended sheet.	3	Aero Research Council R&M No.2574
	Influence of thickness chord ratio and aspect ratio on weight of aircraft applied to a bomber specification.	23	
	Potentialities of research into detail design.	29	
	Stresses in built up beams due to an abrupt change in shear stress at a loading section.	48	Aero Research Council R&M No.2775

Author	Title of Report	No.	External publication
Taylor, J.	Characteristics required for accelerometers for measuring low frequency accelerations in flight.	65	
	Design and use of counting accelerometers.	78	Aero Research Council R&M No.2812
	Automatic control of laboratory representation of kinetic heating.	256	
Templeton, H.	Criteria for the prevention of flutter of tab systems.	57	Aero Research Council R&M No.2825
	Control surface flutter with the stick free.	69	Aero Research Council R&M No.2824
	The technique of flutter calculations.	142	Aero Research Council Current Paper No.172
	Symposium on the flutter problem in aircraft design.	147	
	Use of a geared flap to prevent wing flutter.	151	
Walker, P.B.	Research work in aircraft structures.	1	Aero Research Council R&M No.2327
	Mechanical vibration and aero-elasticity	26	Journal Royal Aeronautical Society October 1946
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	Proposals for a new Structures laboratory.	53	
	A new test frame for large aircraft.	62	

RESTRICTED

Author	Title of Report	No.	External publication
Walker, P.B.	Destructive energy in aircraft pressure cabins.	66	Journal Royal Aeronautical Society April 1950
	A new test frame for fuselages with and without pressure cabins.	71	
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	Some interesting aspects of structural research.	83	
	Fatigue nomenclature for aircraft structural workers.	102	
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	The structural effects of kinetic heating in supersonic flight.	189	Journal Royal Aeronautical Society September 1955
	Static strength of a Comet I pressure cabin.	196	
	Investigation into the accident to the Viscount aircraft G-ALEB on 14th March 1957.	230	

RESTRICTED

Author	Title of Report	No.	External publication
Walker, P.B.	The incidence of cracked bolts for Viscount Aircraft. (Accident investigation for Viscount aircraft G-ALWE.)	233	
	The effect of contact angle on the fatigue life of steel bolts in tension. (Accident investigation for Viscount aircraft G-ALWE.)	234	
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	Fatigue of a nut and bolt.	238	Journal Royal Aeronautical Society June 1958
	Some notes on pressure-cabin design.	242	Aircraft Eng September 1958
	Note on material and structural damping.	243	
	Fretting in the light of aircraft experience.	251	Journal Royal Aeronautical Society May 1959
	Victor accident investigation 1959-61.	266	
Warren, C.H.E.	An investigation into an aircraft to fly at a Mach number of 2.0.	131 Aero 2462	
Webb, D.R.B.	Effects of wing stiffness changes on the modes and frequencies of a model delta aircraft.	245	Aero Research Council R&M No.3268
Williams, D.	Sandwich construction. A practical approach for the use of aircraft designers.	2	Aero Research Council R&M No.2466
	A simple method of allowing for shear deflections in calculating the vibration modes and frequencies of structures.	49	

Author	Title of Report	No.	External publication
Williams, D.	Some notes on the Hill aero-isoclinic principle for swept back wings from the point of view of torsional stiffness and aero-elastic behaviour.	60	
	A simplified treatment of a fixed root swept wing built on Hill's isoclinic principle.	101	Aero Research Council R&M No.2870
	The theory and prevention of aeroplane nose wheel shimmy.	125	
	A water borne runway.	144	
	Aircraft structural research - a critical survey.	156	
	A general method (depending on the aid of a digital computer) for deriving the influence coefficients of aeroplane wings.	168	
	Solution of aero-elastic problems by means of influence coefficients.	169	
	A method of introducing artificial structural damping for controlling the torsional oscillations of a wing.	199	
	Notes on the practical application of the method of R.A.E. Report No. Structures 168.	209	
Williams, D.E.	A new method of obtaining lower limits for the solutions of 'Eigenvalue' problems for beams and plates.	225	
	The effect of wing-tailplane aerodynamic interaction on tail flutter.	176	
	On the integral equations of two-dimensional subsonic flutter derivative theory.	181	
	A note on some integrals in aerodynamics.	222	
Williams, Margaret	The effect of structural damping on binary flutter.	212	Aero Research Council R&M No.3169

Author	Title of Report	No.	External publication
Williams, Margaret	Flutter of an all-moving tailplane.	226	Aero Research Council R&M No.3284
Winkworth, W.J.	The effect of tight clamping on the fatigue strength of joints.	121	Aero Research Council R&M No.2873
	Improvements in the fatigue strength of joints by the use of interference fits.	127	Aero Research Council R&M No.2874
	Behaviour of skin fatigue cracks at the corners of windows in a Comet 1 fuselage.	257	
Wittmeyer, H.	Theoretical investigation of tornary lifting surface, control surface, trimming tab flutter and derivation of flutter criteria.	19	Aero Research Council R&M No.2671
	Criteria for the prevention of flutter of tab systems.	57	Aero Research Council R&M No.2825
Wolfe, M.O.W.	Torsional vibration characteristics of Centaurus VII C engine.	22	
	Torsional vibration investigation on the Muskateer engine.	43	Aero Research Council Current Paper No.34
	Measurements of pressure disturbances on the ground due to sonic bangs.	191	
	Aspects of elevated temperature design and design criteria for supersonic aircraft structures.	288	
Wood, W.E.	Catalogue of Structures Department Reports with alphabetical list of authors.	100 200	
Woodcock, D.L.	Symmetric flutter characteristics of a hypothetical delta wing.	68	Aero Research Council R&M No.2839
	Aerodynamic derivatives for a delta wing oscillating in elastic modes.	132	Aero Research Council Current Paper No.170
	Aerodynamic derivatives for two cropped delta wings and one arrowhead wing oscillating in distortion modes.	201	Aero Research Council Current Paper No.268

Author	Title of Report	No.	External publication
Woodcock, D.L.	Calculated aerodynamic forces on a swept back untapered wing oscillating in incompressible flow.	217	Aero Research Council Current Paper No.411
	Tables of aerodynamic flutter derivatives for thin wings and control surfaces in two dimensional supersonic flow.	228	Aero Research Council Current Paper No.382
Woolley, H.C.	Measurements of pressure disturbances on the ground due to sonic bangs.	191	
Staff of Structures Dept.	Empirical formulae for moments of inertia of aircraft.	28	
Staffs of Aero and Structures Dept.	Report of the R.A.E. advanced bomber project group.	16 Aero 2246	
	Some problems of the aero-isoclinic wing.	46 Aero 2331	
Members of the R.A.E.	Technical investigation into an explosion of German 109/501 A.T.O. unit at Westcott on 14 November, 1947.	21 R.P.D.2	
Staff of the R.A.E.	Report of the R.A.E. advanced fighter project group.	34 Aero 2300	
	Design of 'Perspex' components for aircraft. A symposium held at R.A.E. November, 1948.	35 Aero 453	

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